



TELEPHONE TRIAGE AND ADVICE IN AZORES UTILITY, SAFETY AND IMPACT



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Introduction

The Azorean archipelago consists of nine islands spread across 600 kilometers and 1300 kilometers west of mainland Portugal. With a total population of 246,102 set in three distinct clusters and Island population ranging from as little as 430 (0.2%) in Corvo to 137,699 in São Miguel (55.9%). Major healthcare services are centered only in three Islands.

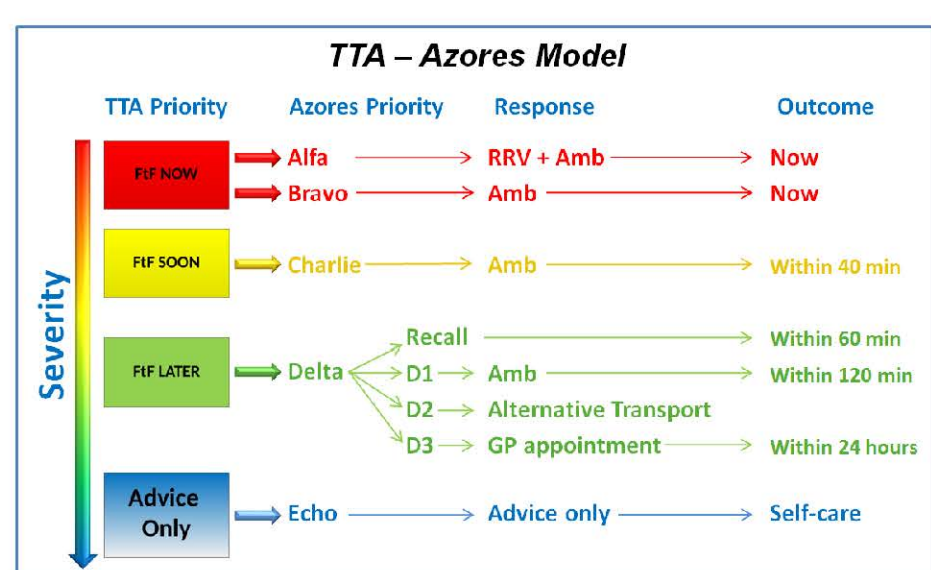
In 2013, in an attempt to overcome some of the archipelago's challenges a pilot deployment of the Manchester Triage System/Telephone Triage and Advice (MTS/TTA¹) was implemented. This telephone version of MTS/TTA had been used within UK Ambulance Trusts for the purposes of secondary triage. The Azorean pilot involved primary clinical triage of all emergency patients for the first time in the world.

Aims

Evaluate the new system assessing the clinical safety and utility of the Manchester Triage System/Telephone Triage and Advice and the impact of deploying it on the health system of the Azorean Archipelago.

Methodology

In a way to adapt in to a primary triage, there was a need to adjust the original version of the Manchester Triage System/Telephone Triage and Advice to the Azorean reality (priorities, resources allocated and outcome times).



The study focused on three main parameters:

For Auditing:

- All health emergency calls triaged using MTS/TTA and a minimum of 5 calls per clinician per month
- Calls were audited against a Clinical Audit Tool, to achieve a benchmark of 85%
- 100% of calls relating to complaints or serious incidents to be audited

A series of **Severity Indicators** were identified throughout the patient journey:

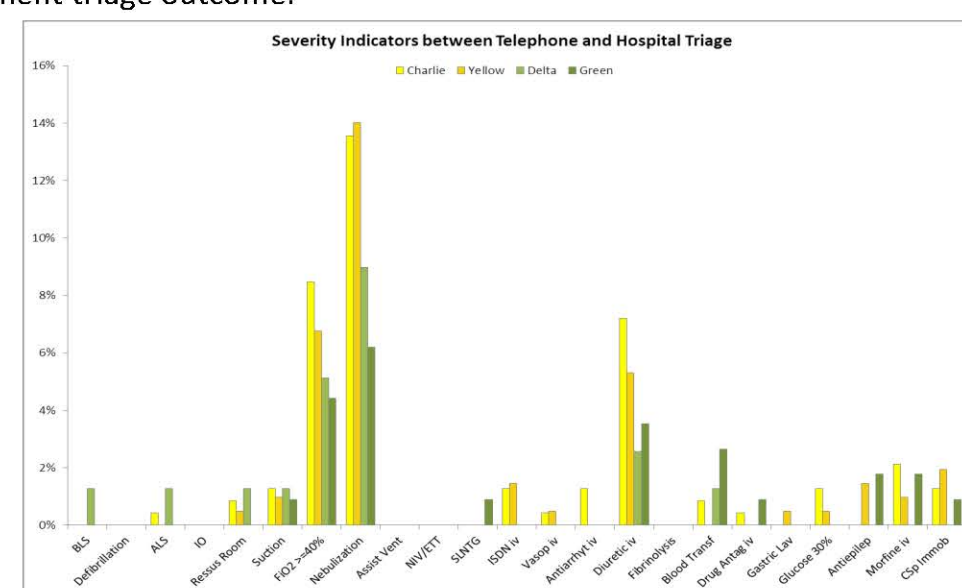
- Glasgow Coma Scale (GCS) <12
- Pre Hospital Early Warning Score (PHEWS) >4
- Critical Interventions (i.e. BLS, ALS, defibrillation, time critical drug interventions)
- Face to Face Manchester Triage System² outcome

For Patient Satisfaction evaluation:

- 100% Advice Only prioritization calls traced and patients interviewed within 72 hours
- Patient satisfaction survey across all categories of triage outcomes within 3 days of presentation

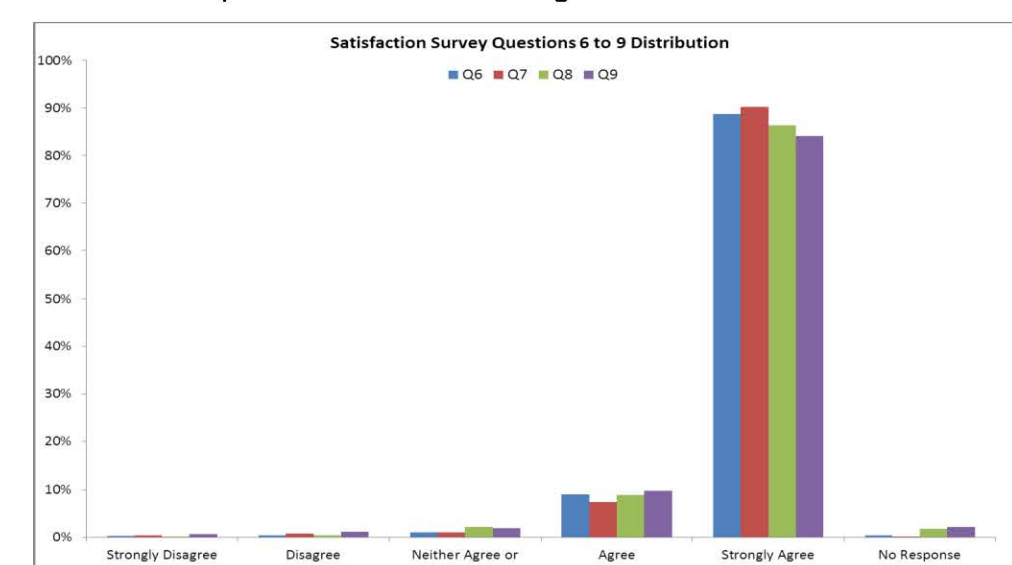
Results

The predominant therapeutic measures did not differ between Telephone Triage and Advice and the Emergency Department triage outcome.



Patient Satisfaction

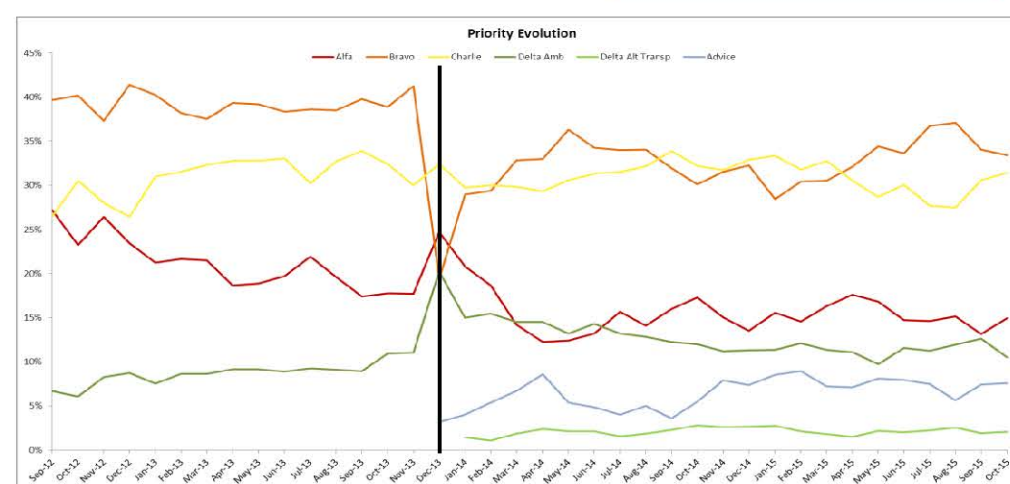
A total of 863 telephone surveys were carried out. The survey focused heavily on the caller experience, professionalism of the clinicians, satisfaction and compliance with the advice given.



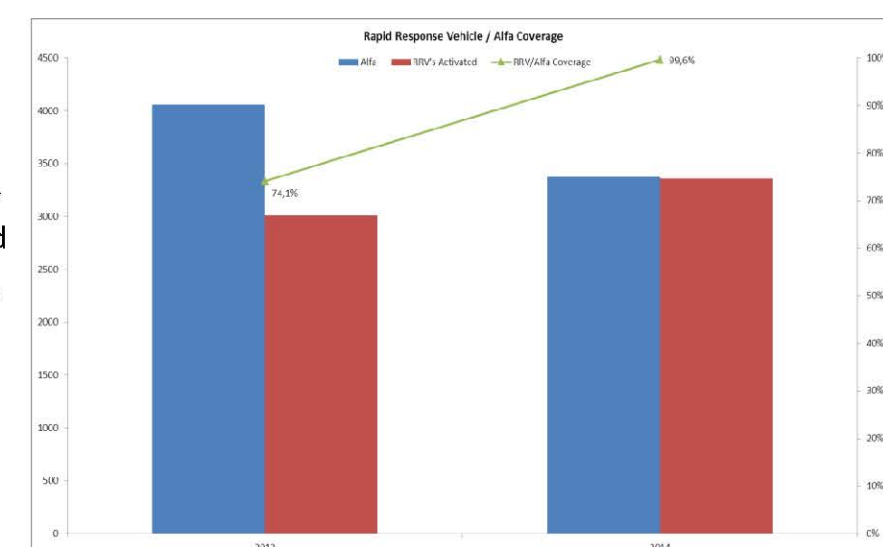
Nearly all patients answered strongly or very strongly.

There was no significant variation regardless of priorities given.

Utility and Impact



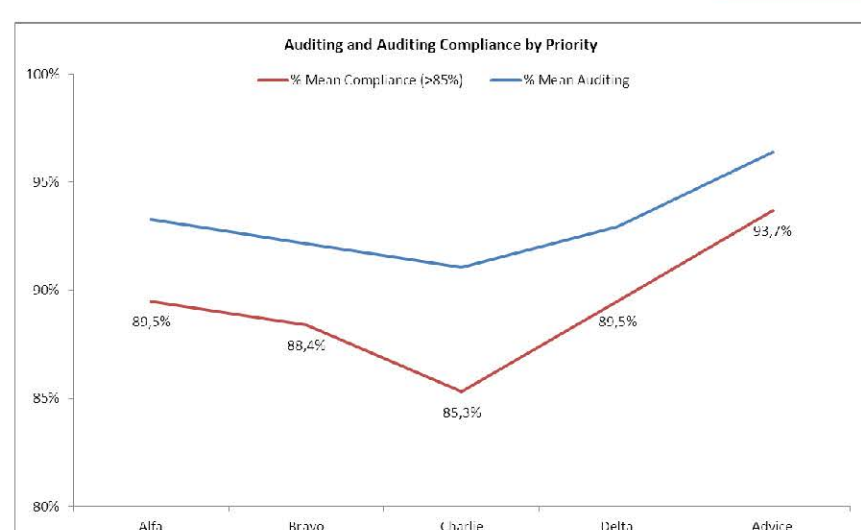
The new approach to triage has effectively pushed acuity downwards, resulting in a reduction in Alpha and Bravo responses and a corresponding increase in alternative transport and self-care of 14.8%.



Use of MTS/TTA has reached sustainable levels, being able to increase the availability of a Rapid Response Vehicle (RRV) from 74.6% of the time to 99.6% on a fully sustainable basis.

Results

Auditing

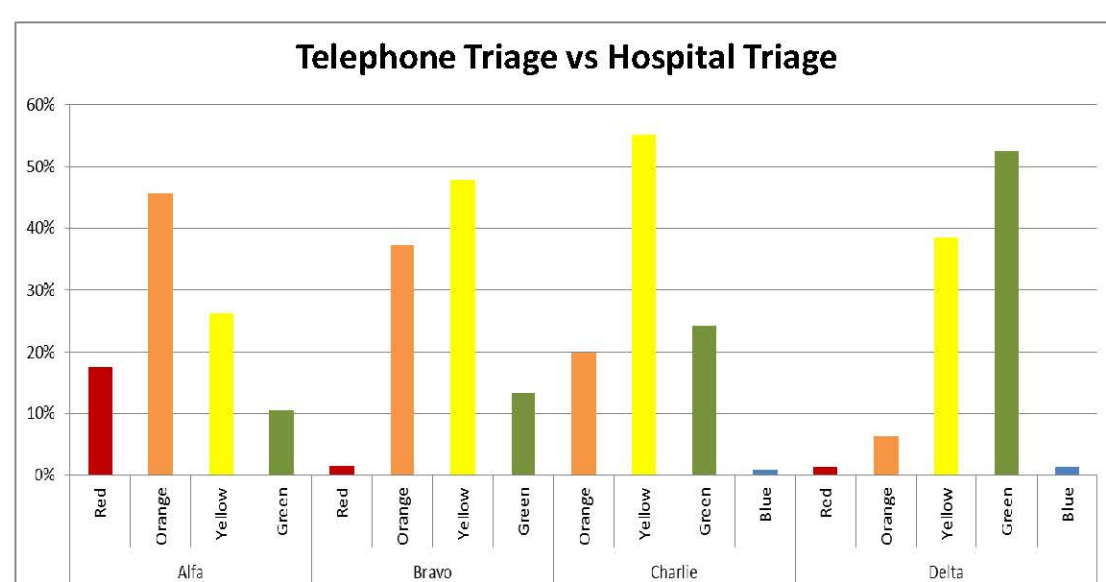


A total of 1130 call audits have been performed. 89.7% of all calls achieved the 85% target and a mean score of 93.4%. The variation is minimal, and demonstrates a slight reduction in compliance within the Charlie and Delta categories.

Severity Indicators

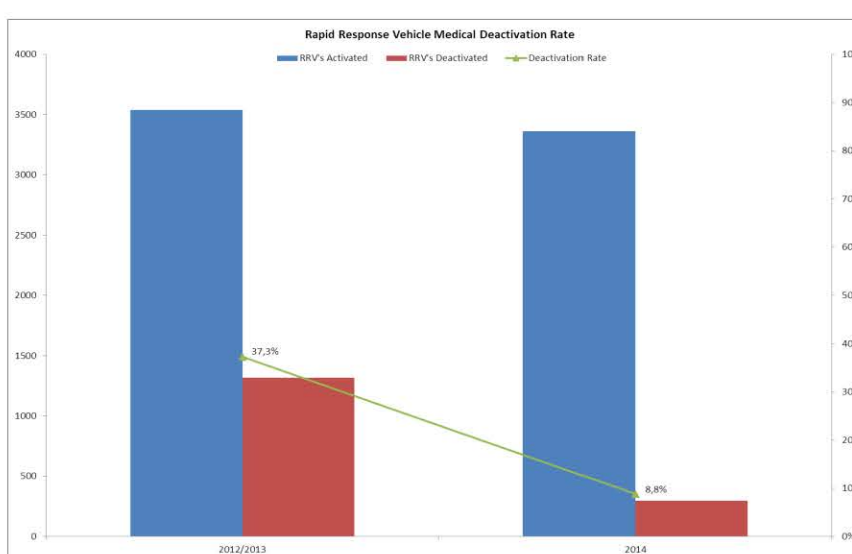
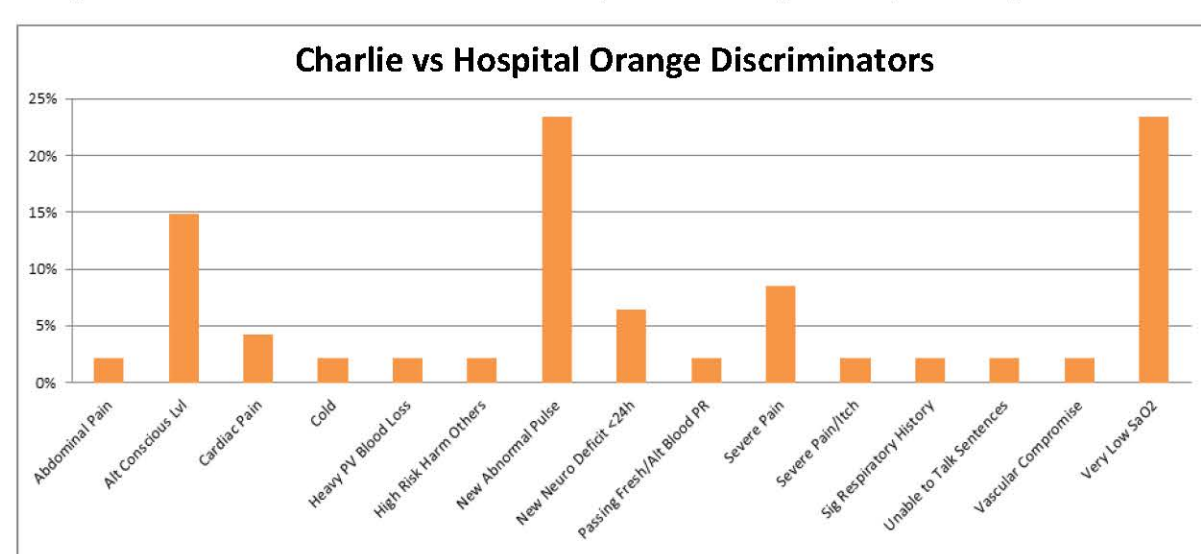
A total of 438 patient records were retrieved from an Emergency Department, sampled across all categories.

Telephone Triage and Advice generated a high level of sensitivity within Alpha and Bravo. The high number of patients receiving lower priority is due to the interventions carried en-route to hospital.



Within the Charlie category, 19.9% received a higher triage outcome on arrival. Of the Face-to-Face discriminators elicited, four were responsible for 70.2% of the variability.

Delta outcomes produced similar variation when compared directly to hospital triage outcomes.



Once mobilized the de-activation of Rapid Response Vehicle (RRV) has reduced from 37.3% to 8.8% demonstrating greater confidence in appropriate allocation of valuable resources.

The improvements to the use of resources have had a significant impact on costs. The financial savings have ranged from 3.2% at the outset, to 9.1% in February 2015. The overall realization of savings being 6.2% over the initial 23 months.



Conclusions

- ✓ Application of the MTS/TTA demonstrated good levels of clinical safety and utility.
- ✓ Variation in triage outcomes between MTS/TTA and MTS are explained due to the discriminator differences, interventions provided by clinicians at scene, and deterioration or improvement throughout the episode.
- ✓ No significant clinical episodes that could be attributed to MTS/TTA or user error.
- ✓ Improved the ability to respond to time critical patients, resulting in sustainable levels of resources allocation and a significant impact on financial costs.
- ✓ Further work is needed to evaluate the direct referral of patients into a fragmented primary care system.

References

- Advanced Life Support Group (2016) Emergency Triage: Telephone Triage and Advice Manchester Triage Group John Wiley and Sons ISBN 978-1-118-36938-8
- Advanced Life Support Group (2013) Emergency Triage 3rd Edition Manchester Triage Group John Wiley and Sons, ISBN 1118299051